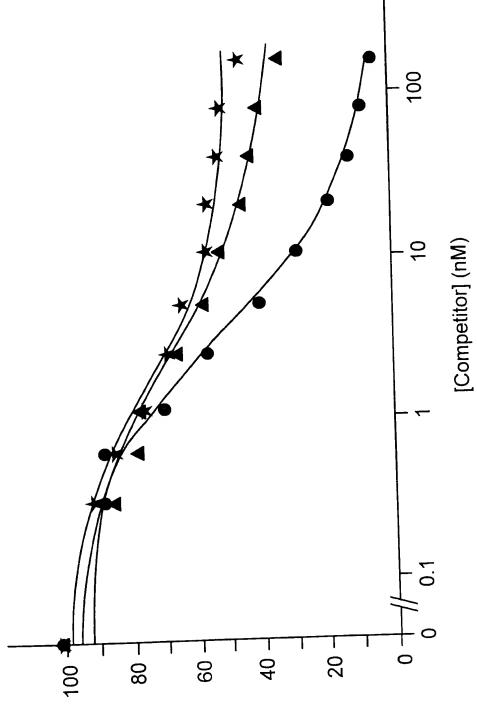
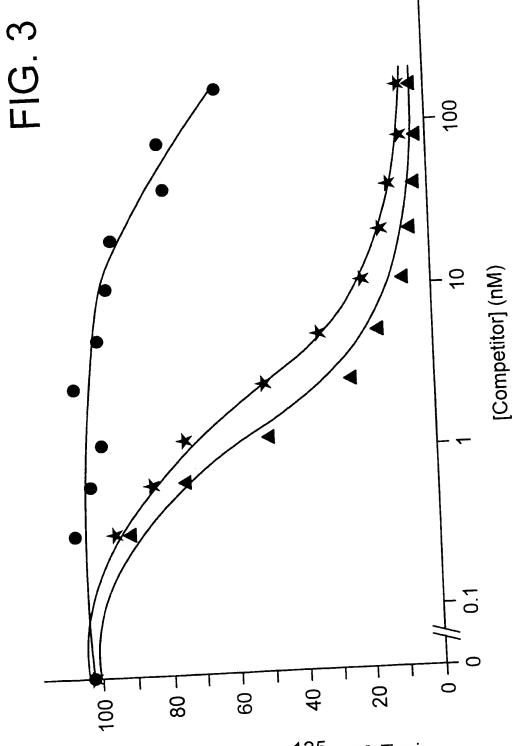


% Max. Binding of 125 I-Bt2-Toxin





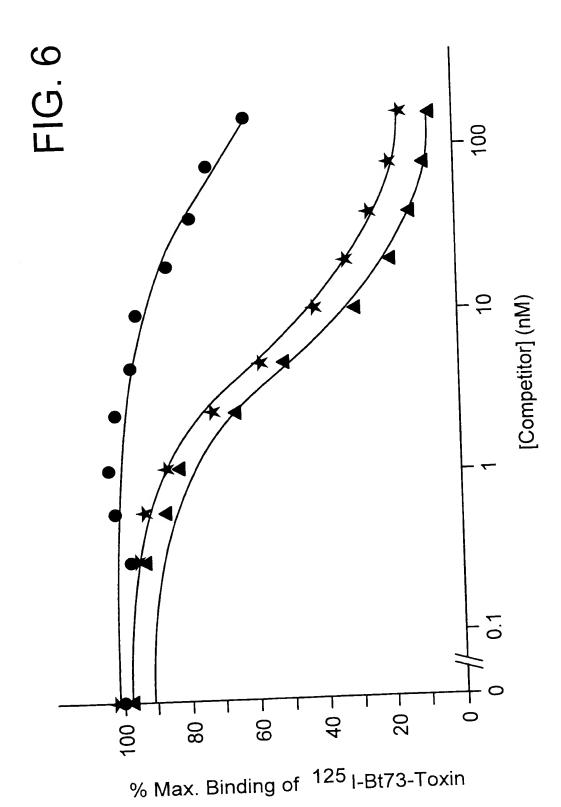
% Max. Binding of 125 I-Bt3-Toxin

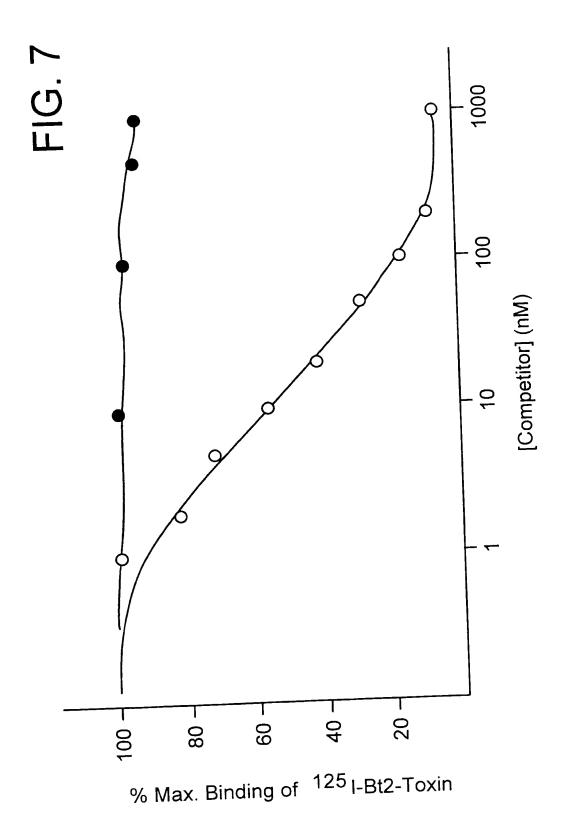


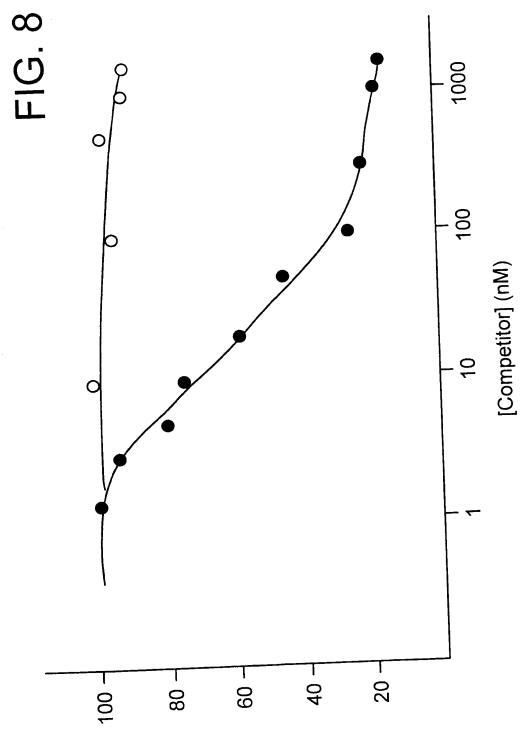
% Max. Binding of 125 I-Bt2-Toxin

% Max. Binding of 125 I-Bt73-Toxin

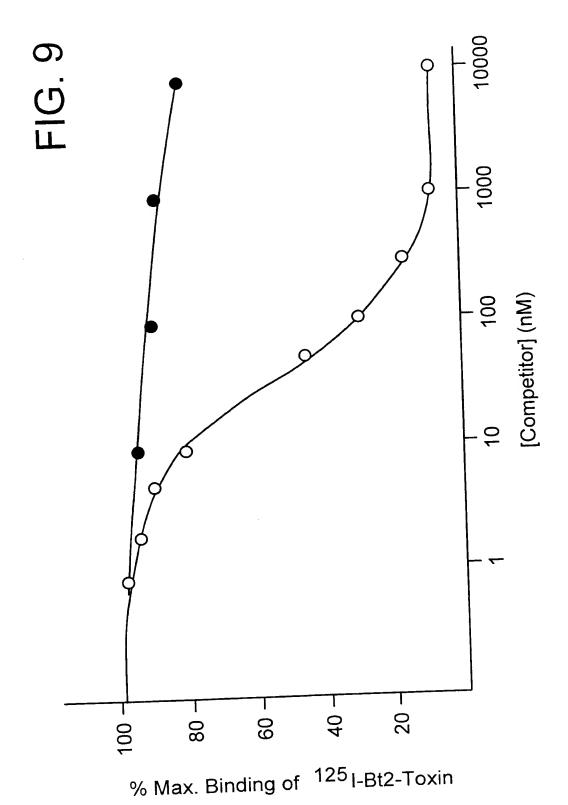
% Max. Binding of 125 I-Bt3-Toxin

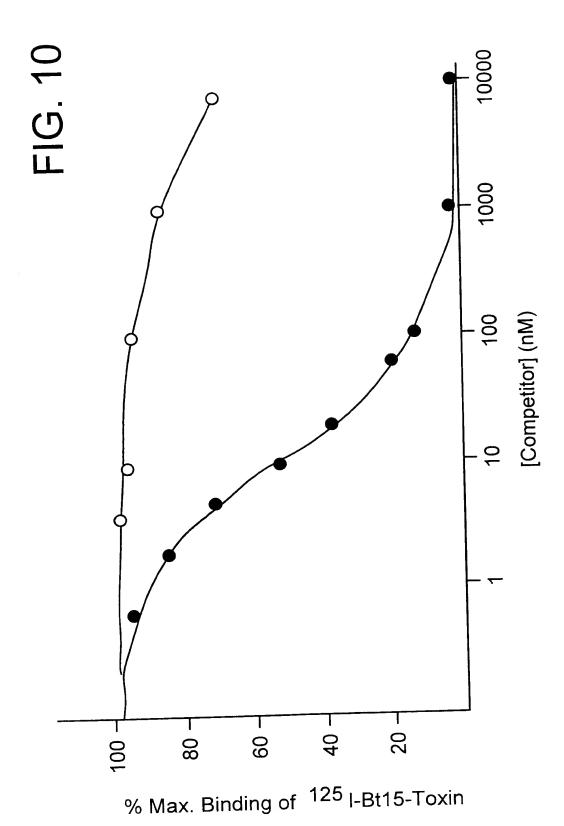


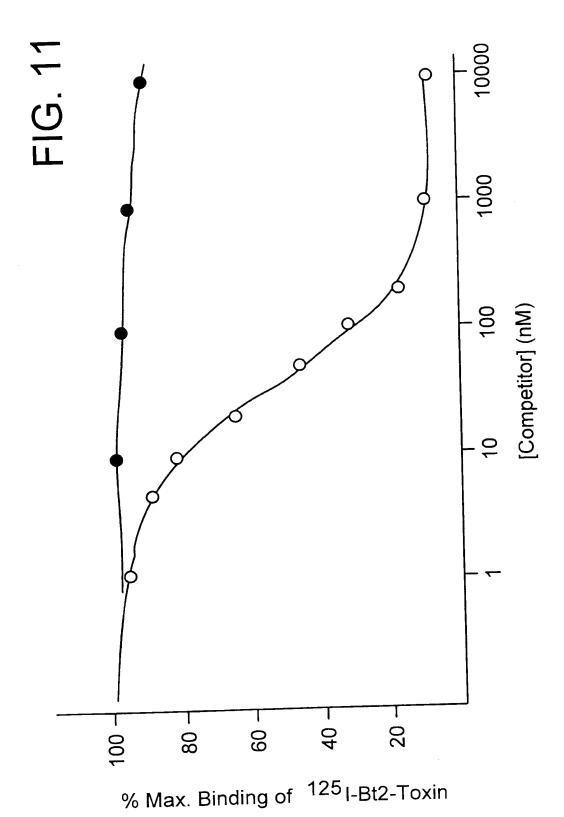


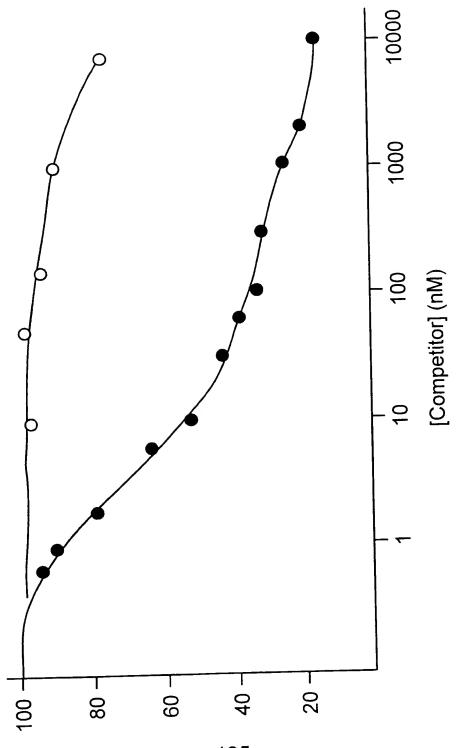


% Max. Binding of 125 I-Bt14-Toxin









% Max. Binding of 125 I-Bt18-Toxin

# FIG. 13A

10	20	30	40	50
GGATCTGTTT TAATA	TAAGG GAT	TTTGTGCC CTTC	TCGTTA TATI	CTTTTA
60	70	80	90	100
TTAGCCCCAA AAACT	AGTGC AA	CTAAATAT TTTT	FATAATT ACA	CTGATTA
110	120	130	140	150
AATACTTTAT TTTTG	GGAGT AA	GATTTATG CTG	AAATGTA ATA	AAATTCG
160	170	180	190	200
TTCCATTTTC TGTA	.TTTTCT C#	ATAAAATGT TTC	ATATGCT TTA	AATTGTA
210	220	230	240	250
GTAAAGAAAA ACAG	STACAAA C	TTAAAAGGA CTI	TTAGTAAT TTA	AATAAAAA
260 AAGGGGATAG TTT	269 ATG GAA MET Glu	278 ATA AAT AAT Ile Asn Asn	287 CAA AAC CAA GIn Asn GIn	TGT

# FIG. 13B

	296			305			314			323			
GTG	CCT	TAC	AAT	TGT	TTA	AGT	AAT	CCT	AAG	GAG	ATA	Α¯	TA
Val	Pro	Tyr	Asn	Cys	Leu	Ser	Asn	Pro	Lys	Glu	lle	Į!	le
													68
332			341			350			359				
TTA	GGC	GAG	GAA	AGG	CTA	GAA	ACA	GGG	i AAT	ACT	GIA	G ر	CA
Leu	Gly	Glu	Glu	Arg	Leu	Glu	Thr	Gly	Asn	Thr	Val	F	Ala
					000			395			404	ļ	
		377			386					. тл-			ΔΤ
GAC	ATT	TCA	TTA	GGG	CTT	ATT	AAI	111		\ 1A	0-1		1/11 1/11
Asp	lle	Ser	Leu	Gly	Leu	lle	Asn	Phe	e Leu	ı Iyı	r Se	r <i>i</i>	4511
	440			422			431			440	0		
	413	004	001	GGA	GGA				A GG	T TT.	A CT	Α (	GAA
TTT	GTA	A CCA	\ GG/	A GGA	400 )	\ III	ر الم	, U., Va	. Glv	, le	u Le	u	Glu
Phe	Val	Pro	Gly	Gly	Gly	Pne	110	va	, 0,		•		
449			458	3		467	7		47	6			485
TT 1	<b>Λ</b> Τ.	л ТС(		A TTI	- ATA	A GG	G CC	T TC	G CA	A TG	G GA	١T	ATT
		4 1G	ای د	y Phe	مال	. Glv	· Pro	n Se	er Gl	n Ti	rp As	sp	lle
Leu	ı lle	ırp	יוט (	y Pile	; 110	ران	, , ,				•		
		49	4		503	3		51	2		52	21	
	<b>-</b>			A AT			A TT	G A1	T AG	ST C	AA A	GΑ	ATA
11						u Gl	n le		e So	er G	in A	ırg	lle
Ph	e Le	u Al	a Gl	n lle		u Oi	.,	"				-	

#### **FIG. 13C**

557 548 539 530 GAA GAA TTT GCT AGG AAT CAG GCA ATT TCA AGA TTG GAG Glu Glu Phe Ala Arg Asn Gln Ala Ile Ser Arg Leu Glu 602 593 584 575 566 GGG CTA AGC AAT CTT TAT AAG GTC TAT GTT AGA GCG TTT Gly Leu Ser Asn Leu Tyr Lys Val Tyr Val Arg Ala Phe 638 629 620 611 AGC GAC TGG GAG AAA GAT CCT ACT AAT CCT GCT TTA AGG Ser Asp Trp Glu Lys Asp Pro Thr Asn Pro Ala Leu Arg 674 665 656 647 GAA GAA ATG CGT ATA CAA TTT AAT GAC ATG AAT AGT GCT Gin Phe Asn Asp MET Asn Ser Ala Glu Glu MET Arg Ile 719 710 701 692 683 CTC ATA ACG GCT ATT CCA CTT TTT AGA GTT CAA AAT TAT Pro Leu Phe Arg Val Gln Asn Tyr lle Thr Ala lle Leu 755 746 737 728 GAA GTT GCT CTT TTA TCT GTA TAT GTT CAA GCC GCA AAC Glu Val Ala Leu Leu Ser Val Tyr Val Gln Ala Ala Asn

#### FIG. 13D

TTA CAT TTA TCT ATT TTA AGG GAT GTT TCA GTT TTC GGA His Leu Ser Ile Leu Arg Asp Val Ser Val Phe Gly GAA AGA TGG GGA TAT GAT ACA GCG ACT ATC AAT AAT CGC Glu Arg Trp Gly Tyr Asp Thr Ala Thr lie Asn Asn Arg TAT AGT GAT CTG ACT AGC CTT ATT CAT GTT TAT ACT AAC His Val Tyr Thr Asn Tyr Ser Asp Leu Thr Ser Leu lle CAT TGT GTG GAT ACG TAT AAT CAG GGA TTA AGG CGT TTG His Cys Val Asp Thr Tyr Asn Gln Gly Leu Arg Arg Leu GAA GGT CGT TTT CTT AGC GAT TGG ATT GTA TAT AAT CGT Gly Arg Phe Leu Ser Asp Trp lle Val Tyr Asn Arg TTC CGG AGA CAA TTG ACA ATT TCA GTA TTA GAT ATT GTT Ser Val Leu Asp Ile Val Phe Arg Arg Gln Leu Thr lle

# FIG. 13E

GCG TTT TTT CCA AAT TAT GAT ATT AGA ACA TAT CCA ATT Ala Phe Phe Pro Asn Tyr Asp lle Arg Thr Tyr Pro CAA ACA GCT ACT CAG CTA ACG AGG GAA GTC TAT CTG GAT Thr Ala Thr Gin Leu Thr Arg Glu Val Tyr Leu Asp TTA CCT TTT ATT AAT CAA AAT CTT TCT CCT GCA GCA AGC Leu Pro Phe Ile Asn Glu Asn Leu Ser Pro Ala Ala Ser TAT CCA ACC TTT TCA GCT GCT GAA AGT GCT ATA ATT AGA Arg Tyr Pro Thr Phe Ser Ala Ala Glu Ser Ala lle AGT CCT CAT TTA GTA GAC TTT TTA AAT AGC TTT ACC ATT Ser Pro His Leu Val Asp Phe Leu Asn Ser Phe Thr lle TAT ACA GAT AGT CTG GCA CGT TAT GCA TAT TGG GGA GGG Tyr Thr Asp Ser Leu Ala Arg Tyr Ala Tyr Trp Gly Gly

# FIG. 13F

CAC TTG GTA AAT TCT TTC CGC ACA GGA ACC ACT ACT AAT His Leu Val Asn Ser Phe Arg Thr Gly Thr Thr Asn TTG ATA AGA TCC CCT TTA TAT GGA AGG GAA GGA AAT ACA lle Arg Ser Pro Leu Tyr Gly Arg Glu Gly Asn Thr GAG CGC CCC GTA ACT ATT ACC GCA TCA CCT AGC GTA CCA Glu Arg Pro Val Thr lle Thr Ala Ser Pro Ser Val Pro ATA TTT AGA ACA CTT TCA TAT ATT ACA GGC CTT GAC AAT Phe Arg Thr Leu Ser Tyr Ile Thr Gly Leu Asp Asn TCA AAT CCT GTA GCT GGA ATC GAG GGA GTG GAA TTC CAA Ser Asn Pro Val Ala Gly Ile Glu Gly Val Glu Phe Gln AAT ACT ATA AGT AGA AGT ATC TAT CGT AAA AGC GGT CCA Thr lle Ser Arg Ser lle Tyr Arg Lys Ser Gly Pro

# FIG. 13G

ATA GAT TCT TTT AGT GAA TTA CCA CCT CAA GAT GCC AGC Asp Ser Phe Ser Glu Leu Pro Pro Gln Asp Ala Ser GTA TCT CCT GCA ATT GGG TAT AGT CAC CGT TTA TGC CAT Val Ser Pro Ala IIe Gly Tyr Ser His Arg Leu Cys His GCA ACA TTT TTA GAA CGG ATT AGT GGA CCA AGA ATA GCA Ala Thr Phe Leu Glu Arg lle Ser Gly Pro Arg lle Ala GGC ACC GTA TTT TCT TGG ACA CAC CGT AGT GCC AGC CCT Gly Thr Val Phe Ser Trp Thr His Arg Ser Ala Ser Pro ACT AAT GAA GTA AGT CCA TCT AGA ATT ACA CAA ATT CCA Thr Asn Glu Val Ser Pro Ser Arg Ile Thr Gln lle Pro TGG GTA AAG GCG CAT ACT CTT GCA TCT GGT GCC TCC GTC Trp Val Lys Ala His Thr Leu Ala Ser Gly Ala Ser Val

# FIG. 13H

ATT AAA GGT CCT GGA TTT ACA GGT GGA GAT ATT CTG ACT Lys Gly Pro Gly Phe Thr Gly Gly Asp Ile Leu Thr AGG AAT AGT ATG GGC GAG CTG GGG ACC TTA CGA GTA ACC Arg Asn Ser MET Gly Glu Leu Gly Thr Leu Arg Val Thr TTC ACA GGA AGA TTA CCA CAA AGT TAT TAT ATA CGT TTC lle Arg Phe Phe Thr Gly Arg Leu Pro Gln Ser Tyr Tyr CGT TAT GCT TCG GTA GCA AAT AGG AGT GGT ACA TTT AGA Tyr Ala Ser Val Ala Asn Arg Ser Gly Thr Phe Arg TAT TCA CAG CCA CCT TCG TAT GGA ATT TCA TTT CCA AAA Tyr Ser Gln Pro Pro Ser Tyr Gly lle Ser Phe Pro Lys ACT ATG GAC GCA GGT GAA CCA CTA ACA TCT CGT TCG TTC Thr MET Asp Ala Gly Glu Pro Leu Thr Ser Arg Ser Phe

# FIG. 131

GCT CAT ACA ACA CTC TTC ACT CCA ATA ACC TTT TCA CGA Ala His Thr Thr Leu Phe Thr Pro Ile Thr Phe Ser Arg GCT CAA GAA GAA TTT GAT CTA TAC ATC CAA TCG GGT GTT Gln Glu Glu Phe Asp Leu Tyr Ile Gln Ser Gly Val TAT ATA GAT CGA ATT GAA TTT ATA CCG GTT ACT GCA ACA Tyr lle Asp Arg lle Glu Phe lle Pro Val Thr Ala Thr TTT GAG GCA GAA TAT GAT TTA GAA AGA GCG CAA AAG GTG Phe Glu Ala Glu Tyr Asp Leu Glu Arg Ala Gln Lys Val GTG AAT GCC CTG TTT ACG TCT ACA AAC CAA CTA GGG CTA Val Asn Ala Leu Phe Thr Ser Thr Asn Gln Leu Gly Leu AAA ACA GAT GTG ACG GAT TAT CAT ATT GAT CAG GTA TCC Lys Thr Asp Val Thr Asp Tyr His Ile Asp Gln Val Ser

## FIG. 13J

AAT CTA GTT GCG TGT TTA TCG GAT GAA TTT TGT CTG GAT Asn Leu Val Ala Cys Leu Ser Asp Glu Phe Cys Leu Asp GAA AAG AGA GAA TTG TCC GAG AAA GTT AAA CAT GCA AAG Glu Lys Arg Glu Leu Ser Glu Lys Val Lys His Ala Lys CGA CTC AGT GAT GAG CGG AAT TTA CTT CAA GAT CCA AAC Arg Leu Ser Asp Glu Arg Asn Leu Leu Gln Asp Pro Asn TTC AGA GGG ATC AAT AGG CAA CCA GAC CGT GGC TGG AGA Phe Arg Gly lle Asn Arg Gln Pro Asp Arg Gly Trp Arg GGA AGT ACG GAT ATT ACT ATC CAA GGA GGA GAT GAC GTA Thr lle Gln Gly Gly Asp Asp Val Gly Ser Thr Asp lle TTC AAA GAG AAT TAC GTT ACG CTA CCG GGT ACC TTT GAT Phe Lys Glu Asn Tyr Val Thr Leu Pro Gly Thr Phe Asp

# FIG. 13K

GAG TGC TAT CCA ACG TAT TTA TAT CAA AAA ATA GAT GAG Glu Cys Tyr Pro Thr Tyr Leu Tyr Gln Lys lle Asp Glu TCG AAA TTA AAA GCC TAT ACC CGT TAT CAA TTA AGA GGG Ser Lys Leu Lys Ala Tyr Thr Arg Tyr Gln Leu Arg Gly TAT ATC GAA GAT AGT CAA GAC TTA GAA ATC TAT TTA ATT lle Glu Asp Ser Gln Asp Leu Glu lle Tyr Leu CGT TAC AAT GCA AAA CAC GAA ATA GTA AAT GTA CCA GGT Arg Tyr Asn Ala Lys His Glu IIe Val Asn Val Pro Gly ACA GGA AGT TTA TGG CCT CTT TCT GTA GAA AAT CAA ATT Thr Gly Ser Leu Trp Pro Leu Ser Val Glu Asn Gln Ile GGA CCT TGT GGA GAA CCG AAT CGA TGC GCG CCA CAC CTT Gly Pro Cys Gly Glu Pro Asn Arg Cys Ala Pro His Leu

# FIG. 13L

GAA TGG AAT CCT GAT TTA CAC TGT TCC TGC AGA GAC GGG Glu Trp Asn Pro Asp Leu His Cys Ser Cys Arg Asp Gly GAA AAA TGT GCA CAT CAT TCT CAT CAT TTC TCT TTG GAC Glu Lys Cys Ala His His Ser His His Phe Ser Leu Asp ATT GAT GTT GGA TGT ACA GAC TTA AAT GAG GAC TTA GGT Asp Val Gly Cys Thr Asp Leu Asn Glu Asp Leu Gly GTA TGG GTG ATA TTC AAG ATT AAG ACG CAA GAT GGC CAC Val Trp Val lle Phe Lys Ile Lys Thr Gln Asp Gly His GCA CGA CTA GGG AAT CTA GAG TTT CTC GAA GAG AAA CCA Ala Arg Leu Gly Asn Leu Glu Phe Leu Glu Glu Lys Pro TTA TTA GGA GAA GCA CTA GCT CGT GTG AAA AGA GCG GAG Leu Leu Gly Glu Ala Leu Ala Arg Val Lys Arg Ala Glu

#### **FIG. 13M**

AAA AAA TGG AGA GAC AAA CGC GAA ACA TTA CAA TTG GAA Lys Lys Trp Arg Asp Lys Arg Glu Thr Leu Gln Leu Glu ACA ACT ATC GTT TAT AAA GAG GCA AAA GAA TCT GTA GAT lle Val Tyr Lys Glu Ala Lys Glu Ser Val Asp Thr GCT TTA TTT GTA AAC TCT CAA TAT GAT AGA TTA CAA GCG Ala Leu Phe Val Asn Ser Gln Tyr Asp Arg Leu Gln Ala GAT ACG AAC ATC GCG ATG ATT CAT GCG GCA GAT AAA CGC Asp Thr Ash Ile Ala MET Ile His Ala Ala Asp Lys Arg GTT CAT AGA ATT CGA GAA GCG TAT CTG CCG GAG CTG TCT His Arg Ile Arg Glu Ala Tyr Leu Pro Glu Leu Ser GTG ATT CCG GGT GTC AAT GCG GCT ATT TTT GAA GAA TTA lle Pro Gly Val Asn Ala Ala lle Phe Glu Glu Leu

#### FIG. 13N

GAA GAG CGT ATT TTC ACT GCA TTT TCC CTA TAT GAT GCG Glu Glu Arg lle Phe Thr Ala Phe Ser Leu Tyr Asp Ala AGA AAT ATT ATT AAA AAT GGC GAT TTC AAT AAT GGC TTA lle Lys Asn Gly Asp Phe Asn Asn Gly Leu Arg Asn lle TTA TGC TGG AAC GTG AAA GGG CAT GTA GAG GTA GAA GAA Leu Cys Trp Asn Val Lys Gly His Val Glu Val Glu Glu CAA AAC AAT CAC CGT TCA GTC CTG GTT ATC CCA GAA TGG Gln Asn Asn His Arg Ser Val Leu Val Ile Pro Glu Trp GAG GCA GAA GTG TCA CAA GAG GTT CGT GTC TGT CCA GGT Glu Ala Glu Val Ser Gln Glu Val Arg Val Cys Pro Gly CGT GGC TAT ATC CTT CGT GTT ACA GCG TAC AAA GAG GGA Arg Gly Tyr lle Leu Arg Val Thr Ala Tyr Lys Glu Gly

#### FIG. 13P

There is the state of

TAT GGA GAA GGT TGC GTA ACG ATC CAT GAG ATC GAG AAC Tyr Gly Glu Gly Cys Val Thr lle His Glu lle Glu Asn AAT ACA GAC GAA CTG AAA TTC AAC AAC TGT GTA GAA GAG Asn Thr Asp Glu Leu Lys Phe Asn Asn Cys Val Glu Glu GAA GTA TAT CCA AAC AAC ACG GTA ACG TGT ATT AAT TAT Glu Val Tyr Pro Asn Asn Thr Val Thr Cys lle Asn Tyr ACT GCG ACT CAA GAA GAA TAT GAG GGT ACG TAC ACT TCT Thr Ala Thr Gln Glu Glu Tyr Glu Gly Thr Tyr Thr Ser CGT AAT CGA GGA TAT GAC GAA GCC TAT GGT AAT AAC CCT Arg Asn Arg Gly Tyr Asp Glu Ala Tyr Gly Asn Asn Pro TCC GTA CCA GCT GAT TAT GCG TCA GTC TAT GAA GAA AAA Ser Val Pro Ala Asp Tyr Ala Ser Val Tyr Glu Glu Lys

## FIG. 13Q

TCG TAT ACA GAT AGA CGA AGA GAG AAT CCT TGT GAA TCT Ser Tyr Thr Asp Arg Arg Glu Asn Pro Cys Glu Ser AAC AGA GGA TAT GGA GAT TAC ACA CCA CTA CCA GCT GGT Asn Arg Gly Tyr Gly Asp Tyr Thr Pro Leu Pro Ala Gly TAT GTA ACA AAG GAA TTA GAG TAC TTC CCA GAG ACC GAT Tyr Val Thr Lys Glu Leu Glu Tyr Phe Pro Glu Thr Asp AAG GTA TGG ATT GAG ATT GGA GAA ACA GAA GGA ACA TTC Lys Val Trp lle Glu lle Gly Glu Thr Glu Gly Thr Phe ATC GTG GAC AGC GTG GAA TTA CTC CTT ATG GAG GAA TAG Val Asp Ser Val Glu Leu Leu Leu MET Glu Glu

## FIG. 13R

GACCATCCGA GTATAGCAGT TTAATAAATA TTAATTAAAA TAGTAGTCTA ACTTCCGTTC CAATTAAATA AGTAAATTAC AGTTGTAAAA AAAAACGAAC ATTACTCTTC AAAGAGCGAT GTCCGTTTTT TATATGGTGT GT

# FIG. 14A

10	20	30	40	50							
AATAGAATCT CAAATCTCGA TGACTGCTTA GTCTTTTTAA TACTGTCTAC											
60	70	80	90	100							
TTGACAGGGGTAGGAACATA ATCGGTCAAT TTTAAATATG GGGCATATAT											
110	120	130	140	150							
TGATATTTTA T	AAAATTTGT T	ACGTTTTTT GT/	ATTTTTC ATAA	GATGTG							
160	170	180	190	200							
TCATATGTAT T	AAATCGTGG T	AATGAAAAA CA(	GTATCAAA CTA	TCAGAAC							
210	220	230	239								
TTTGGTAGTT TAATAAAAAA ACGGAGGTAT TTT ATG GAG GAA											
TTTGGTAGTT	TAATAAAAAA A	CGGAGGIALII	I AIG GAO GA	·A							
TTTGGTAGTT	TAATAAAAA A	CGGAGGTAT TI	MET Glu G								
		266									
248	257	266	MET Glu Gi	u							
248 AAT AAT CAA	257 AAT CAA TGC		MET Glu Gi 275 AAT TGT TTA	u							
248 AAT AAT CAA	257 AAT CAA TGC	266 ATA CCT TAC	MET Glu Gi 275 AAT TGT TTA	AGT Ser							
248 AAT AAT CAA Asn Asn Gln	257 AAT CAA TGC Asn Gln Cys	266 ATA CCT TAC Ile Pro Tyr	MET Glu Gi 275 AAT TGT TTA Asn Cys Leu 311	AGT Ser 320							
248 AAT AAT CAA Asn Asn Gln  284 AAT CCT GAA	257 AAT CAA TGC Asn Gln Cys 293 GAA GTA CTT	266 ATA CCT TAC Ile Pro Tyr	MET Glu Gi 275 AAT TGT TTA Asn Cys Leu 311 GAA CGG ATA	AGT Ser 320							

# FIG. 14B

		329			338			347			356	
ACT	GGT	AAT	TCA :	TCA	ATT	GAT	ATT	TCT	CTG	TCA	CTT	GTT
Thr	Gly	Asn	Ser	Ser	lle	Asp	lle	Ser	Leu	Ser	Leu	Val
	365			374			383			392		
CAG	TTT	ATG	GTA	TCT	AAC	TTT	GTA	CCA	GGG	GGA	GGA	TTT
Gln	Phe	Leu	Val	Ser	Asn	Phe	Val	Pro	Gly	Gly	Gly	Phe
401			410			419			428			437
<del>1</del> 01	GTT	GGA	TTA	ΔΤΑ	GAT	TTT	GTA	TGG	GGA	ATA	GTT	GGC
Leu	Val	Gly	Leu	lle	Asp	Phe	Val	Trp	Gly	lle	Val	Gly
		•										
		446			455						473	
ССТ	TCT	CAA	TGG	GAT	GCA	TTT	СТА	GTA	CAA	ATT	GAA	CAA
Pro	Ser	Gln	Trp	Asp	Ala	Phe	Leu	Val	Gln	lle	Glu	Gln
	400			404			500			509		
	482			491					r <u>C</u> CI			GCT
TTA	A AT	r aai	r gaa	AGA	. Alf	A GC1	GAA	\ II	- 41-	۸۰۰	) / U ( ) Aen	Δla
Leu	ı lle	Asr	n Glu	Arg	lle	Ala	Glu	Phe	e Ala	Arg	ASII	Λia
518	3		527	,		536	i		545	5		554
		T GC	T AA		GA.	A GGA	A TTA	4 GG	A AA(	CAA	T TTA	AAT
Ala	a lle	e Ala	a Asr	n Leu	ı Glu	ı Gly	Leu	ı Gl	y Asr	n Asr	n Phe	e Asr

# FIG. 14C

		563			572			581			590	
۸۲۸	ΤΔΤ		GAA	GCA	TTT	AAA	GAA	TGG	GAA	GAA	GAT	CCT
lle	Tvr	Val	Glu	Ala	Phe	Lys	Glu	Trp	Glu	Glu	Asp	Pro
110	. , .											
	599			608			617			626		
AAT	AAT	CCA	GAA	ACC	AGG	ACC	AGA	GTA	ATT	GAT	CGC	TTT
Asn	Asn	Pro	Glu	Thr	Arg	Thr	Arg	Val	lle	Asp	Arg	Phe
												671
635			644			653			662			
CGT	ATA	CT1	GAT	GGG	CTA	CTT	GAA	AGG	GAC	: ATT	CCT	ICG
Arg		Leu	Asp	Gly	Leu	Leu	Glu	Arg	Asp	lle	Pro	Ser
								000	•		707	
		680	)		689			698				OTT
TTT	CG	A AT	T TC	r gga	, TTT	GA	4 GT	A CC	C CT1	TTA	\ TCC	GTT
Phe	e Ar	g lle	Sei	r Gly	Phe	e Glu	ı Va	l Pro	) Leu	ı Leı	ı Ser	Val
		_		725			73	4		743	3	
	71	6				- OT			۸ GC	т ΔТ.	Δ TT.	AGA
TA	T GC	T CA	A GC	G GC	CAA	I CI	G CA		A 00	- 116	Lei	A AGA J Arg
Ту	r Al	a Gl	n Ala	a Ala	As	n Le	u Hi	s Le	u Ala	a lle	, re	ı Aig
	_		70	4		77	'n		77	9		788
75	2		76		_ ^-			<b>ΣΛ Τ</b> Ω	ر در در	ά ΤΤ	G AC	A ACG
G٨	T TO	CT G	TA AT	T TT	T GG	iA GA	AA AC	) A IC	ی ی	)/\         #	Th	A ACG
As	sp S	er V	al II	e Ph	e G	ly G	lu A	rg T	rp G	ıy Le	u III	11 1111

## FIG. 14D

ATA AAT GTC AAT GAA AAC TAT AAT AGA CTA ATT AGG CAT Asn Val Asn Glu Asn Tyr Asn Arg Leu lle ATT GAT GAA TAT GCT GAT CAC TGT GCA AAT ACG TAT AAT Asp Glu Tyr Ala Asp His Cys Ala Asn Thr Tyr Asn CGG GGA TTA AAT AAT TTA CCG AAA TCT ACG TAT CAA GAT Arg Gly Leu Asn Asn Leu Pro Lys Ser Thr Tyr Gln Asp TGG ATA ACA TAT AAT CGA TTA CGG AGA GAC TTA ACA TTG Thr Tyr Asn Arg Leu Arg Arg Asp Leu Thr Leu lle ACT GTA TTA GAT ATC GCC GCT TTC TTT CCA AAC TAT GAC Thr Val Leu Asp Ile Ala Ala Phe Phe Pro Asn Tyr Asp AAT AGG AGA TAT CCA ATT CAG CCA GTT GGT CAA CTA ACA Asn Arg Arg Tyr Pro lle Gln Pro Val Gly Gln Leu Thr

# FIG. 14E

AGG GAA GTT TAT ACG GAC CCA TTA ATT AAT TTT AAT CCA Glu Val Tyr Thr Asp Pro Leu lle Asn Phe Asn Pro CAG TTA CAG TCT GTA GCT CAA TTA CCT ACT TTT AAC GTT Gin Leu Gin Ser Val Ala Gin Leu Pro Thr Phe Asn Val ATG GAG AGC AGC GCA ATT AGA AAT CCT CAT TTA TTT GAT MET Glu Ser Ser Ala Ile Arg Asn Pro His Leu Phe Asp ATA TTG AAT AAT CTT ACA ATC TTT ACG GAT TGG TTT AGT Leu Asn Asn Leu Thr lle Phe Thr Asp Trp Phe Ser GTT GGA CGC AAT TTT TAT TGG GGA GGA CAT CGA GTA ATA Val Gly Arg Asn Phe Tyr Trp Gly Gly His Arg Val Ile TCT AGC CTT ATA GGA GGT GGT AAC ATA ACA TCT CCT ATA Ser Ser Leu IIe Gly Gly Gly Asn IIe Thr Ser Pro IIe

## FIG. 14F

TAT GGA AGA GAG GCG AAC CAG GAG CCT CCA AGA TCC TTT Tyr Gly Arg Glu Ala Asn Gln Glu Pro Pro Arg Ser Phe ACT TTT AAT GGA CCG GTA TTT AGG ACT TTA TCA AAT CCT Thr Phe Asn Gly Pro Val Phe Arg Thr Leu Ser Asn Pro ACT TTA CGA TTA TTA CAG CAA CCT TGG CCA GCG CCA CCA Thr Leu Arg Leu Leu Gln Gln Pro Trp Pro Ala Pro Pro TTT AAT TTA CGT GGT GTT GAA GGA GTA GAA TTT TCT ACA Phe Ash Leu Arg Gly Val Glu Gly Val Glu Phe Ser Thr CCT ACA AAT AGC TTT ACG TAT CGA GGA AGA GGT ACG GTT Thr Asn Ser Phe Thr Tyr Arg Gly Arg Gly Thr Val GAT TCT TTA ACT GAA TTA CCG CCT GAG GAT AAT AGT GTG Asp Ser Leu Thr Glu Leu Pro Pro Glu Asp Asn Ser Val

# FIG. 14G

CCA CCT CGC GAA GGA TAT AGT CAT CGT TTA TGT CAT GCA Pro Pro Arg Glu Gly Tyr Ser His Arg Leu Cys His Ala ACT TTT GTT CAA AGA TCT GGA ACA CCT TTT TTA ACA ACT Thr Phe Val Gln Arg Ser Gly Thr Pro Phe Leu Thr Thr GGT GTA GTA TTT TCT TGG ACG CAT CGT AGT GCA ACT CTT Gly Val Val Phe Ser Trp Thr His Arg Ser Ala Thr Leu ACA AAT ACA ATT GAT CCA GAG AGA ATT AAT CAA ATA CCT Thr Asn Thr lle Asp Pro Glu Arg lle Asn Gln lle Pro TTA GTG AAA GGA TTT AGA GTT TGG GGG GGC ACC TCT GTC Leu Val Lys Gly Phe Arg Val Trp Gly Gly Thr Ser Val ATT ACA GGA CCA GGA TTT ACA GGA GGG GAT ATC CTT CGA Thr Gly Pro Gly Phe Thr Gly Gly Asp lie Leu Arg lle

## FIG. 14H

AGA AAT ACC TTT GGT GAT TTT GTA TCT CTA CAA GTC AAT Arg Asn Thr Phe Gly Asp Phe Val Ser Leu Gln Val Asn ATT AAT TCA CCA ATT ACC CAA AGA TAC CGT TTA AGA TTT Asn Ser Pro lle Thr Gln Arg Tyr Arg Leu Arg Phe CGT TAC GCT TCC AGT AGG GAT GCA CGA GTT ATA GTA TTA Arg Tyr Ala Ser Ser Arg Asp Ala Arg Val Ile Val Leu ACA GGA GCG GCA TCC ACA GGA GTG GGA GGC CAA GTT AGT Thr Gly Ala Ala Ser Thr Gly Val Gly Gln Val Ser GTA AAT ATG CCT CTT CAG AAA ACT ATG GAA ATA GGG GAG Val Asn MET Pro Leu Gln Lys Thr MET Glu lle Gly Glu AAC TTA ACA TCT AGA ACA TTT AGA TAT ACC GAT TTT AGT Asn Leu Thr Ser Arg Thr Phe Arg Tyr Thr Asp Phe Ser

### FIG. 141

AAT CCT TTT TCA TTT AGA GCT AAT CCA GAT ATA ATT GGG Asn Pro Phe Ser Phe Arg Ala Asn Pro Asp Ile lle ATA AGT GAA CAA CCT CTA TTT GGT GCA GGT TCT ATT AGT Ser Glu Gln Pro Leu Phe Gly Ala Gly Ser Ile Ser AGC GGT GAA CTT TAT ATA GAT AAA ATT GAA ATT ATT CTA Ser Gly Glu Leu Tyr IIe Asp Lys IIe Glu lle lle GCA GAT GCA ACA TTT GAA GCA GAA TCT GAT TTA GAA AGA Ala Asp Ala Thr Phe Glu Ala Glu Ser Asp Leu Glu Arg GCA CAA AAG GCG GTG AAT GCC CTG TTT ACT TCT TCC AAT Ala Gln Lya Ala Val Asn Ala Leu Phe Thr Ser Ser Asn CAA ATC GGG TTA AAA ACC GAT GTG ACG GAT TAT CAT ATT lle Gly Leu Lys Thr Asp Val Thr Asp Tyr His

### FIG. 14J

GAT CAA GTA TCC AAT TTA GTG GAT TGT TTA TCA GAT GAA Asp Gln Val Ser Asn Leu Val Asp Cys Leu Ser Asp Glu TTT TGT CTG GAT GAA AAG CGA GAA TTG TCC GAG AAA GTC Phe Cys Leu Asp Glu Lys Arg Glu Leu Ser Glu Lys Val AAA CAT GCG AAG CGA CTC AGT GAT GAG CGG AAT TTA CTT Lys His Ala Lys Arg Leu Ser Asp Glu Arg Asn Leu Leu CAA GAT CCA AAC TTC AGA GGG ATC AAT AGA CAA CCA GAC Gln Asp Pro Asn Phe Arg Gly Ile Asn Arg Gln Pro Asp CGT GGC TGG AGA GGA AGT ACA GAT ATT ACC ATC CAA GGA ile Gln Gly Arg Gly Trp Arg Gly Ser Thr Asp Ile Thr GGA GAT GAC GTA TTC AAA GAG AAT TAC GTC ACA CTA CCG Gly Asp Asp Val Phe Lys Glu Asn Tyr Val Thr Leu Pro

# FIG. 14K

GGT ACC GTT GAT GAG TGC TAT CCA ACG TAT TTA TAT CAG Gly Thr Val Asp Glu Cys Tyr Pro Thr Tyr Leu Tyr Gln AAA ATA GAT GAG TCG AAA TTA AAA GCT TAT ACC CGT TAT lle Asp Glu Ser Lys Leu Lys Ala Tyr Thr Arg Tyr GAA TTA AGA GGG TAT ATC GAA GAT AGT CAA GAC TTA GAA Glu Leu Arg Gly Tyr lle Glu Asp Ser Gln Asp Leu Glu ATC TAT TTG ATC CGT TAC AAT GCA AAA CAC GAA ATA GTA Tyr Leu lle Arg Tyr Asn Ala Lys His Glu lle lle AAT GTG CCA GGC ACG GGT TCC TTA TGG CCG CTT TCA GCC Asn Val Pro Gly Thr Gly Ser Leu Trp Pro Leu Ser Ala CAA AGT CCA ATC GGA AAG TGT GGA GAA CCG AAT CGA TGC Gln Ser Pro lle Gly Lys Cys Gly Glu Pro Asn Arg Cys

### FIG. 14L

GCG CCA CAC CTT GAA TGG AAT CCT GAT CTA GAT TGT TCC Ala Pro His Leu Glu Trp Asn Pro Asp Leu Asp Cys Ser TGC AGA GAC GGG GAA AAA TGT GCA CAT CAT TCC CAT CAT Cys Arg Asp Gly Glu Lys Cys Ala His His Ser His TTC ACC TTG GAT ATT GAT GTT GGA TGT ACA GAC TTA AAT Phe Thr Leu Asp IIe Asp Val Gly Cys Thr Asp Leu Asn GAG GAC TTA GGT GTA TGG GTG ATA TTC AAG ATT AAG ACG Glu Asp Leu Gly Val Trp Val Ile Phe Lys Ile Lys Thr CAA GAT GGC CAT GCA AGA CTA GGG AAT CTA GAG TTT CTC Gln Asp Gly His Ala Arg Leu Gly Asn Leu Glu Phe Leu GAA GAG AAA CCA TTA TTA GGG GAA GCA CTA GCT CGT GTG Glu Glu Lys Pro Leu Leu Gly Glu Ala Leu Ala Arg Val

### FIG. 14M

AAA AGA GCG GAG AAG AAG TGG AGA GAC AAA CGA GAG AAA Lys Arg Ala Glu Lys Lys Trp Arg Asp Lys Arg Glu Lys CTG CAG TTG GAA ACA AAT ATT GTT TAT AAA GAG GCA AAA Leu Gln Leu Glu Thr Asn Ile Val Tyr Lys Glu Ala Lys GAA TCT GTA GAT GCT TTA TTT GTA AAC TCT CAA TAT GAT Glu Ser Val Asp Ala Leu Phe Val Asn Ser Gln Tyr Asp AGA TTA CAA GTG GAT ACG AAC ATC GCG ATG ATT CAT GCG Arg Leu Gln Val Asp Thr Asn Ile Ala MET Ile His Ala GCA GAT AAA CGC GTT CAT AGA ATC CGG GAA GCG TAT CTG Ala Asp Lys Arg Val His Arg Ile Arg Glu Ala Tyr Leu CCA GAG TTG TCT GTG ATT CCA GGT GTC AAT GCG GCC ATT lle Pro Gly Val Asn Ala Ala Pro Glu Leu Ser Val

#### FIG. 14N

TTC GAA GAA TTA GAG GGA CGT ATT TTT ACA GCG TAT TCC Phe Giu Glu Leu Glu Gly Arg lle Phe Thr Ala Tyr Ser TTA TAT GAT GCG AGA AAT GTC ATT AAA AAT GGC GAT TTC Tyr Asp Ala Arg Asn Val Ile Lys Asn Gly Asp Phe AAT AAT GGC TTA TTA TGC TGG AAC GTG AAA GGT CAT GTA Asn Asn Gly Leu Leu Cys Trp Asn Val Lys Gly His Val GAT GTA GAA GAG CAA AAC AAC CAC CGT TCG GTC CTT GTT Asp Val Glu Glu Gln Asn Asn His Arg Ser Val Leu Val ATC CCA GAA TGG GAG GCA GAA GTG TCA CAA GAG GTT CGT Pro Glu Trp Glu Ala Glu Val Ser Gln Glu Val Arg GTC TGT CCA GGT CGT GGC TAT ATC CTT CGT GTC ACA GCA Val Cys Pro Gly Arg Gly Tyr Ile Leu Arg Val Thr Ala

# FIG. 14P

TAT AAA GAG GGA TAT GGA GAG GGC TGC GTA ACG ATC CAT Tyr Lys Glu Gly Tyr Gly Glu Gly Cys Val Thr lle GAG ATC GAA GAC AAT ACA GAC GAA CTG AAA TTC AGC AAC Glu Asp Asn Thr Asp Glu Leu Lys Phe Ser Asn TGT GTA GAA GAG GAA GTA TAT CCA AAC AAC ACA GTA ACG Cys Val Glu Glu Val Tyr Pro Asn Asn Thr Val Thr TGT AAT AAT TAT ACT GGG ACT CAA GAA GAA TAT GAG GGT Cys Asn Asn Tyr Thr Gly Thr Gln Glu Glu Tyr Glu Gly ACG TAC ACT TCT CGT AAT CAA GGA TAT GAC GAA GCC TAT Tyr Thr Ser Arg Asn Gln Gly Tyr Asp Glu Ala Tyr GGT AAT AAC CCT TCC GTA CCA GCT GAT TAC GCT TCA GTC Gly Asn Asn Pro Ser Val Pro Ala Asp Tyr Ala Ser Val

#### FIG. 14Q

TAT GAA GAA AAA TCG TAT ACA GAT GGA CGA AGA GAG AAT Tyr Glu Glu Lys Ser Tyr Thr Asp Gly Arg Arg Glu Asn CCT TGT GAA TCT AAC AGA GGC TAT GGG GAT TAC ACA CCA Pro Cys Glu Ser Asn Arg Gly Tyr Gly Asp Tyr Thr Pro CTA CCG GCT GGT TAT GTA ACA AAG GAT TTA GAG TAC TTC Leu Pro Ala Gly Tyr Val Thr Lys Asp Leu Glu Tyr Phe CCA GAG ACC GAT AAG GTA TGG ATT GAG ATC GGA GAA ACA Pro Glu Thr Asp Lys Val Trp Ile Glu Ile Gly Glu Thr GAA GGA ACA TTC ATC GTG GAT AGC GTG GAA TTA CTC CTT Glu Gly Thr Phe Ile Val Asp Ser Val Glu Leu Leu Leu ATG GAG GAA TAA GATACGTTAT AAAATGTAAC GTATGCAAAT MET Glu Glu .

# FIG. 14R

3843 3853 3863 3873 3883 AAAGAATGAT TACTGACCTA TATTAACAGA TAAATAAGAA AATTTTTATA

3893 3903 3913 3923 CGAATAAAAA ACGGACATCA CTCTTAAGAG AATGATGTCC

FIG. 15A

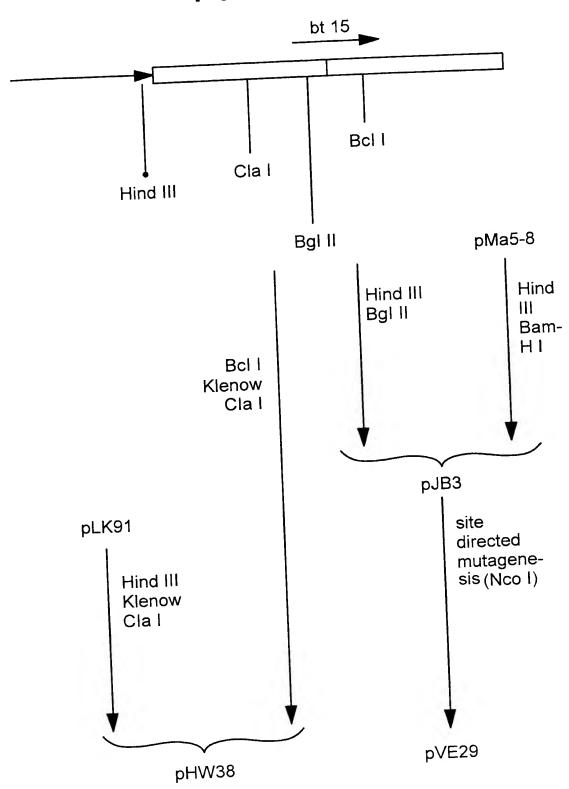


FIG. 15B

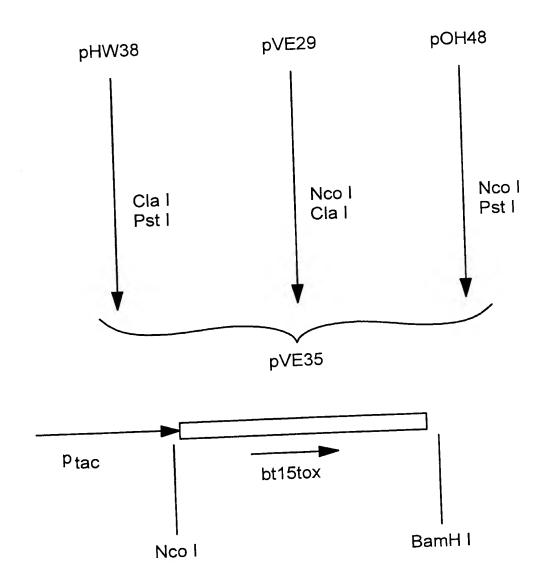


FIG. 15C

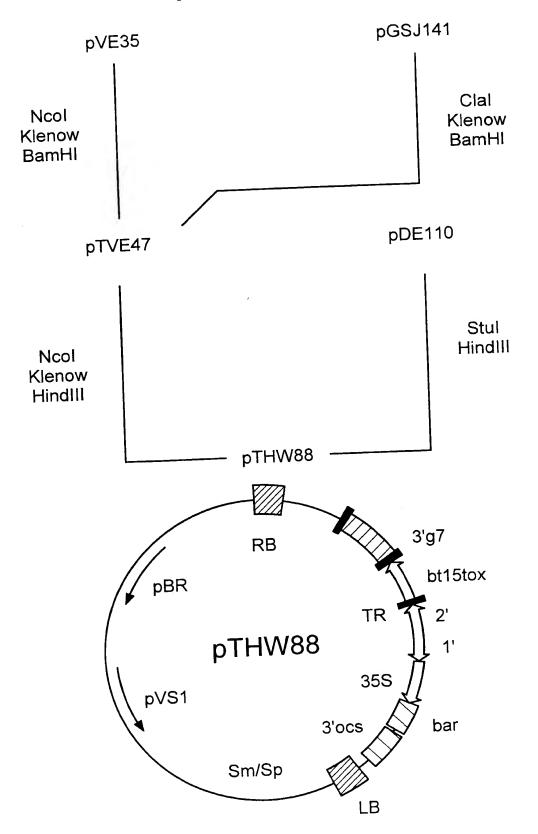


FIG. 16A

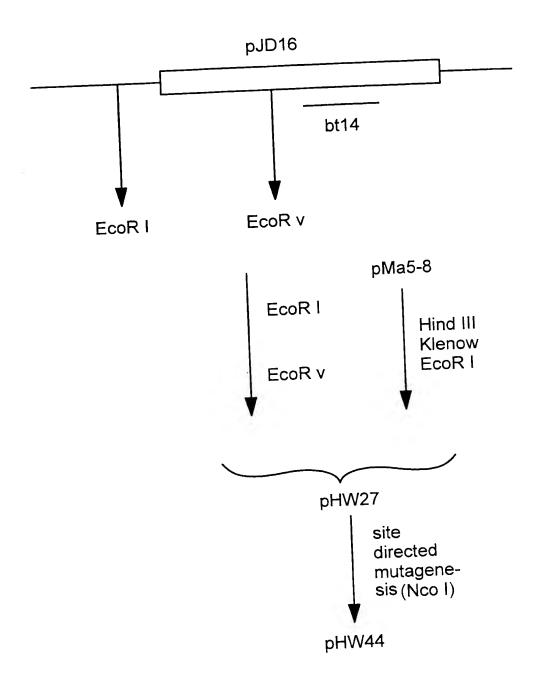
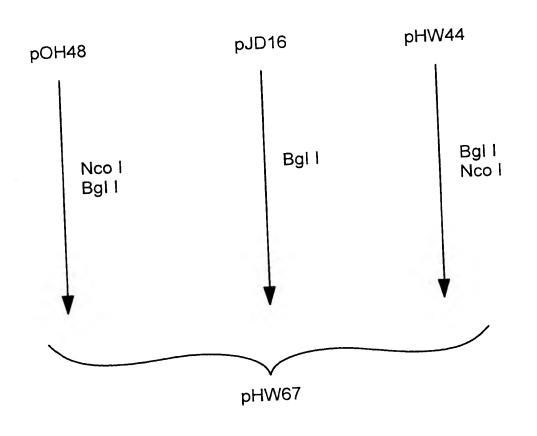


FIG. 16B



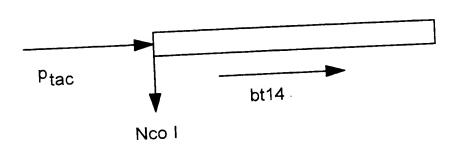


FIG. 16C

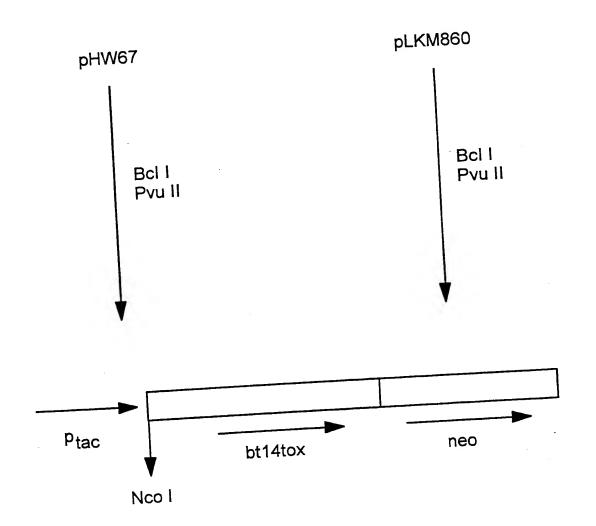


FIG. 16D

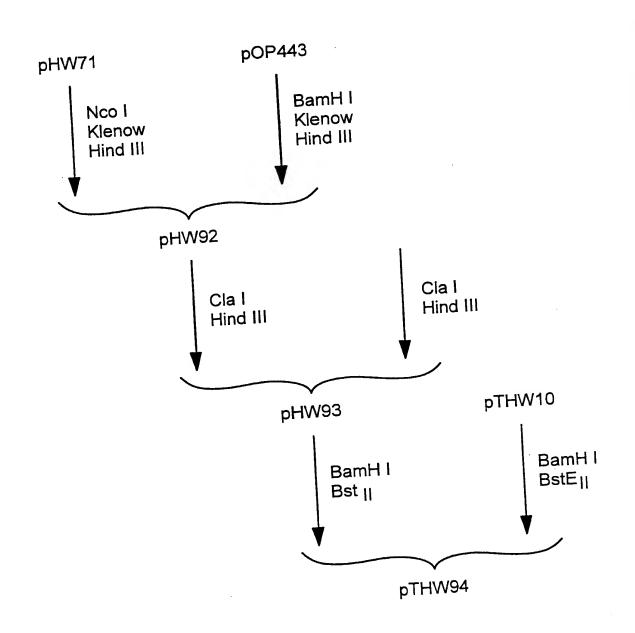


FIG. 16E

